

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Patrizio Vinciarelli et al. Art Unit : Unknown
 Serial No. : Examiner : Unknown
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 Title : POWER CONVERTER CONFIGURATION, CONTROL, AND
 CONSTRUCTION

#2
 Preliminary Amendment
 U. Bickson
 11-29-00

BOX PATENT APPLICATION

Commissioner for Patents
 Washington, D.C. 20231

PRELIMINARY AMENDMENT

Prior to examination, please amend the application as follows:

In the Specification:

On page 1, line 4, before the first line insert the sentence: --This application is a divisional of application serial no. 08/631,793, filed April 10, 1996 (pending), which is a continuation of application serial no. 08/077,011, filed June 17, 1993 (abandoned).--

In the Claims:

Please amend the claims as follows (non-amended claims are shown in smaller type and italics for convenience):

Please cancel claims 1-12, 15-24 without prejudice. ✓

13. *A power converter control circuit apparatus comprising
 first circuitry encapsulated to form a first
 discrete physical unit and connected to respond to control information received from second circuitry encapsulated in
 a second discrete physical unit,
 the two physical units respectively including*

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*subparts of a device for conveying said control information
via a galvanically isolated electromagnetic path.*

14. *A method of providing control circuitry for use in manufacturing individual power converters in a mode in which the individual power converters all conform to a single general design, and different ones of the power converters have different operating characteristics achieved by different components used within the single general design, the method comprising*

providing supplies of different versions of a first discrete control circuit, said first discrete control circuit including a primary-side communicator for sending or receiving control information used in controlling operation of said power converter,

providing supplies of different versions of a second discrete control circuit, said second discrete control circuit including a secondary-side communicator for sending or receiving said control information,

said first and second circuit assemblies being of the kind which are mechanically separable from one another, galvanically isolated from one another, and configured to be placed in positions relative to one another to enable said primary-side and secondary-side communicators to cooperate to pass said control information, and

for each of the individual power converters being manufactured, selecting different versions of the first and second control circuits to achieve desired operating characteristics in the power converters, and

incorporating the selected different versions into each converter in orientations which permit them to communicate control information between them to achieve the desired operating characteristics.

25. *Isolation apparatus for transferring control information between primary-side and secondary-side circuitry in a power converter, said isolation apparatus comprising*

*first communication circuitry for electronically modulating a carrier signal with said control information,
first and second galvanically isolated communicators for sending and receiving said carrier signal between said primary-side and secondary-side circuitries, and*

second communication circuitry which, in response to a signal delivered by said second communicator, generates an electrical signal corresponding to said control information.

26. *The isolation apparatus of claim 25 wherein said carrier signal comprises a high-frequency electrical oscillation.*

27. *The isolation apparatus of claim 25 wherein said first and second communicators comprise conductive windings.*

28. *The isolation apparatus of claim 27 wherein coupling between said windings is achieved without a permeable core linking said windings.*

29. *The isolation apparatus of claim 25 wherein said electronic modulation comprises amplitude modulation.*

30. *A method for transferring control information between primary-side and secondary-side circuitry in a power converter, said method comprising:*

*modulating a carrier signal with said control information, and
coupling said modulated carrier between said primary-side and said secondary-side via galvanically isolated communicators.*

31. *The method of claim 30 further comprising detecting and demodulating said coupled modulated carrier to regenerate said control information.*